Yates.
Marine Algae of
Santa Barbara Co.,
California.

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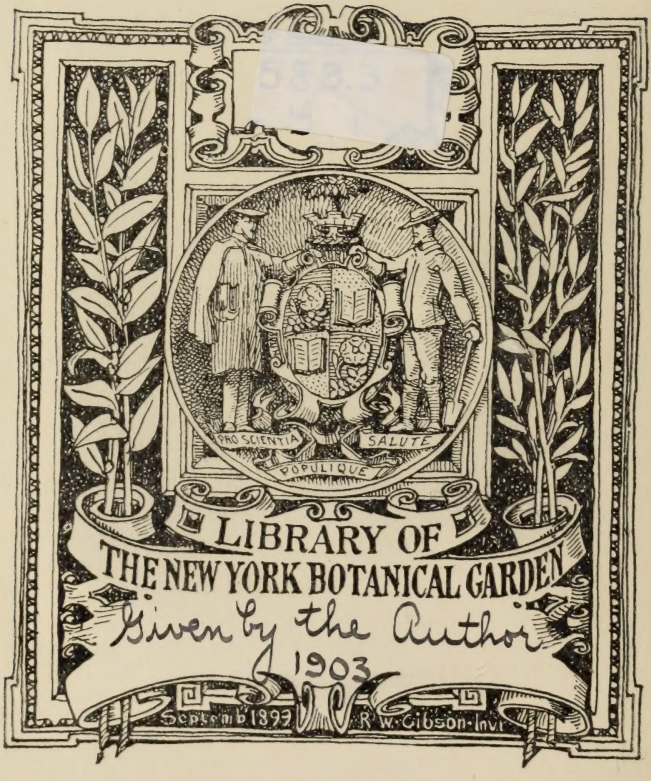
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EXTRACT FROM BULLETIN NO. 3 OF THE SANTA BARBARA SOCIETY OF NATURAL HISTORY.

THE MARINE ALGÆ

OF SANTA BARBARA COUNTY, CALIFORNIA.

By LORENZO GORDIN YATES,
F. L. S.; Corresponding Member Torrey Botanical Club of New York, etc.

1837-1909

SANTA BARBARA, CALIFORNIA.
January, 1902.

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[Extract from Bulletin No. 3 of the Santa Barbara Society of Natural History, 1901.]

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The Marine Algae of Santa Barbara County, California.

BY LORENZO GORDIN YATES, F. L. S., COR. MEMB. TORREY BOT. CLUB OF NEW YORK, ETC.

Our "Sea Mosses" have been a subject of interest to a great many people especially to new comers and visitors; many of whom may have lived in localities near the sea coast, where the sea mosses are more abundant, and nearly as beautiful as with us, but, on account of their time having been otherwise occupied, they have paid no attention to the beautiful marine plants of their own locality, and it is only when they have acquired a competency and start out on their travels, that they have their attention called to the interesting plants of "Old Ocean" and admire their beauty.

For many years some of the people of our city were enthusiastic collectors and students of our Algæ; among them were the late Dr. Dimmick and Professor H. C. Ford who made extensive collections, a large portion of which became the property of our Society of Natural History.

Mrs. Bingham; Miss Lennebecker; Mrs. Ellwood Cooper and other ladies, were also enthusiastic on the subject; these were all members of this Society.

Something over twenty years ago Dr. Dimmick had a list of the then known Algæ of this region printed for use as labels, of which the majority of the names were correct. Some of the species were incorrectly credited to us, or named from their resemblance to species found on the

Atlantic coasts of America and Europe, which have since then been assigned to their proper places as distinct species. Others were given names which are not now recognized or used. Names were given which are now eonsidered as synonyms. Several new species have been discovered and added to the list.

In order to assist students and collectors I have prepared the following list, which is not to be considered as complete; the names of such species are given as I have been able to verify by specimens in my herbarium, or such as are credited by competent authority.

A few whose identity has not been satisfactorily determined are preceded by an (?), and a few which have been credited to us by other collectors have the names of said collectors, or writers inclosed in brackets.

This list will, perhaps, serve as a basis upon which future students may enlarge, as other species are discovered or noted. It will also serve as a convenient check list.

Collectors generally gather the more striking and beautiful of the species, leaving the larger and coarser plants, and the minute species unnoticed, or, dismiss them with a casual glance.

The small species which appear insignificant to the unaided eye are neglected, or left to be worked up by those who make a careful microscopic study of the same. The latter students are however, fully compensated for their labor by the enjoyment of the exquisite beauty and wonderful detail of structure of the minute forms presented to their observation.

The well-know influence of the peculiar conformation of our coast line, whereby Point Concepcion forms a more or less masked line of demarkation between the flora and fauna of the North and the South, may explain the absence from the list of some of the more northerly and coarser species known as "Sea Weeds." It is however probable that some of them may be found on the Islands of San Miguel and Santa Rosa, where the prevailing winds render the rock-bound coast and outlying islets inaccessable during the greater portion of the year.

Some of the Orders which should, perhaps, appear in the list, have not been included, for the reason that their presence has not been noted or verified, but closer observation will doubtless, in time, supply the deficiency.

For the sake of uniformity in the nomenclature of the Californian Algæ I have conformed mainly with the arrangement of Dr. C. L. Anderson in his "California Marine Algæ," published in "Zoe" for October, 1891.

Those portions not represented are, Class I. Cyanophyceæ, (Blue Algæ), and the Orders Diatomaceæ (E.), and Squamarieæ (K.).

The Diatomaceæ especially form a branch of study with the microscope, and are not available for exhibition in an ordinary herbarium. Nor do the others which have been omitted lend themselves to the purpose of adding to the beauty of a collection.

The writer desires to acknowledge the assistance of Dr. W. G. Farlow, Professor of Cryptogamic Botany in Harvard University; Professor W. A. Setchell of our State University; and the late Professor Daniel C. Eaton, formerly of Yale University, in the verification of some of the species.

[NOTE.—For convenience of reference the Classes are numbered from II. to IV. and the Orders are designated by the letters of the alphabet (from C to T). This arrangement will be appreciated when taken in connection with the Alphabetical Index of Genera following the list.]

LIST OF SPECIES.

CLASS I. BLUE ALGÆ. (Omitted.)

CLASS II. CHLOROPHYCEÆ (Green Algæ).

C.

Order SIPHONEÆ.

Bryopsis plumosa, *Lmx.* Dark grass green, in clusters on rocks at low tide.

Codium tomentosum, *Stack.* Common name "Miru." Dark green, velvety stems in clusters, very flexible, about the size of barley straw, 3 to 6 inches high.

D.

Order CONVERVACEÆ. ULVACEÆ.

(The Ulvas, "Sea Lettuce," have flat or thread-like fronds or leaves. Several species grow in fresh water.)

Ulva compressa, *Le Jolis.* On rocks.
=*U. enteromorpha* of Farlow.

Ulva enteromorpha, *Le Jolis.* In estuaries.

Ulva fascinatus, *Delile.*

Ulva intestinalis, *Linn.* In estuaries.

Ulva latissima, *Linn.* "Broad-leaved Sea Lettuce."

The genera Ulva and Enteromorpha have been somewhat mixed up and interchanged, and some of the above named species may be found under both names.

Chætomorpha clavata, *Farl.* At low tide on sand-covered rocks; filaments grass-green, coarse and rigid; unbranched, in tufts or masses.

Cladophora cartilaginea, *Rupr.* On sandy rocks.

Cladophora lætevirens, *Dillw.* Found on the Atlantic Coast. (In this genus the filaments are branching).

E.

Order CHROOLEPIDEÆ.

Chroolepus aureum, *Linn.* This is one of the few Algæ found growing out of water, its habitat being spray-moistened cliffs, trees and other objects in the immediate vicinity of, or overhanging the shore.

F.

Order DIATOMACEÆ.

The species of this Order have been omitted, as they require the aid of the microscope for their study.

CLASS III. MELANOPHYCEÆ. (Brown Algæ).

G.

Order PHÆOSPOREÆ. ZOOSPOREÆ.

Phyllites fascia, *Kutz.* On rocks, not common.
=*Laminaria fascia.* Ag.

Scytosiphon lomentarius, *Ag.* On rocks.
=*Chorda lomentaria*, Lyngb.
=*Chorda filum, var. lomentaria*, Kutz.
Found nearly all over the world. Fronds gregarious, three to eighteen inches long, attached by a disk-like base, shortly stipitate, expanding into a hollow tube, from a quarter of an inch to an inch in diameter, at first cylindrical, afterwards constricted at intervals.

Desmarestia ligulata, *Lmx.* On rocks.

Desmarestia ligulata, var. herbacea.

Spaceolaria fusca, *Ag.* On Amphiroa.

Leibmannia Leveillei, *Ag.*

Chordaria abietina, *Rupr.*

Asperococcus sinuosus, *Bory.*

Agarum Turneri, *Post. and Rupr.* "Sea Colender." Rare in this locality; probably drifted from a distance north.
=*Agarum fimbriatum*, Harv. (?)
=*Fusus pertusus*, Mertens. (Agardh.)

Laminaria Sinclairii, *Farl and Eaton.* "Devil's Apron." Fronds attached by a branching base, stipes expanding into a ribless entire or laciniate lamina.

H.

Order FUCACEÆ. OOSPOREÆ. (Sea Weed.)

Fucus fastigiatus, *Ag.* All the Marine Algæ were formerly included under the name of Fucus.

Fucus furcatus, *Ag.*

Fucus Harveyanus; *Decn.* Common.

Sargassum Agardianum, *Farlow.* "Gulf Weed." The most highly organized and by far the largest genus of

the Fucaceæ, of which at least 150 species have been described. Fronds attached by a disk having branching stems, leaves with a midrib and distinctly stalked air bladders. (Farlow.)

Sargassum piluliferum, *Arg.*

Halidris osmundacea, *Harv.* "Sea Oak."

Egregia Menziesii, *Ag.* Two varieties.

I.

Order DICTYOTEÆ,

Dictyota Kunthii, *Ag.*

Zonaria Tournifortii, *Ag.*

Two other species of this genus, *Z. interrupta* and *Z. lobata*, have been credited to Southern California and are liable to be found in this county, as well as the allied genera Padina and Taonia.

In this Order of plants three kinds of reproductive organs are known—antheridia, spores, and tetraspores. The species are olive-brown and form expanded membranous fronds.

CLASS IV. RHODOPHYCEÆ. (Florideæ.) (Brown Algæ.)

J.

Order PORPHYREÆ.

Porphyra vulgaris, *Harv.* "Laver."

=*Porphyra laciniata*, Ag.; *P. linearis*, Grev.

Common on stones near low-water mark. Found in all parts of the world. In some countries it is used for making soups; the Chinese esteem it highly for that purpose.

Bangia vermicularis, *Harv.* Fronds gelatinous, simple, filamentous, cylindrical, densely tufted.

K.

Order SQUAMARIEÆ.

(A small Order the species of which in habit resemble

lichens rather than algæ.)

Not represented in collections here. The greater part of the species form closely adherent crusts.

L.

Order NEMALIEÆ.

(*Helminthocladieæ*, Agardh and Harv.)

Nemalion Andersonii, *Farlow.*

Helminthocladia purpurea, (Setch.)

Scinaia furcellata, *Bivona.*

=*Ginannia furcellata*, Mont.

A rare species, but widely distributed, being found in most warm seas.

M.

Order CERAMIEÆ.

Ceramium diaphanum, *Roth.* Fronds brownish red, filaments two to four inches high, loosely tufted. Found also on the Atlantic Coasts of America and Europe.

Ceramium rubrum, *Ag.* Fronds robust, dichotomous, branches erect. (Several varieties.)

Ceramium proliferum, a variety of the last above named.

Centroceras clavulatum, *Ag.*

Centroceras Eatonianum, *Farlow.*

Microcladia borealis, *Rupr.*

Microcladia californica, *Farlow.*

Microcladia Coulteri, *Harv.*

The Microcladias (little branches), of which we have three species, are among the most abundant, and most sought for ornamental purposes, and occur in such a variety of form aud color that it is difficult to assign the different varieties to their proper places. The M. borealis may be recognized by its one-sided plumose appearance.

Ptilota densa, *Ag.* Frond plano-compressed, two-edged, decompound pinnate, pinnæ opposite.

Ptilota filicina, *Ag.*

" **hypnoides**, *Harv.* Primary branches of very unequal lengths; one of the pinnæ is simple, the other a branchlet.

Tænioma Clevelandii, *Farl.* Closely allied to Polysiphonia.

Griffithsia opuntioides, *Ag.* A beautiful plant. Fronds dioecious and dimorphous, branches of two kinds.

Callithamnion arbuscula, var. pacifica, *Harv.*

" **dasyoides**, *J. Ag.*

" **floccosum**, *Ag.*

" **heteromorphum**, *J. Ag.* A large and beautiful genus the species of which are not well defined. The name Callithamnion is from two Greek words signifying a beautiful small shrub.

Pikea californica, *Harv.* A monotypic genus; cartilaginous and firm; color brown-red; branches irregularly disposed, repeatedly compound.

N.

Order CRYPTONEMIEÆ.

Nemastoma californica, *Farlow.*

Grateloupia Cutleriæ, *Ktz.*

Schizymenia edulis, *Ag.*

" **coccinea.**

=*Sarcophyllis californica*, J. Ag.

Chrysomenia pseudodichotoma, *Farlow.* Rare.

Kallymenia californica, *Farlow.*

Fauchea californica, *Farl.* (Bimreya californica, *Farl.*) Rare.

Prionites Andersonii, *Eaton.*

" decipiens, *Setchell.*

" lanceolata, *Harv.*

Ricardia Montagnei, *Derb. and Sol.* On tips of Laurencia.

Gigartina canaliculata, *Harv.*

" horrida, *Farl.*

=*Gigartina manillosa*, Ag., var.

Gigartina microphylla, *Harv.*

" **papillata**, *Ag.*

" **radula**, *Ag.*

" **spinosa**, *Ktz.*

" **volans**, *Ag.*

Only one species of this genus is found on the Atlantic Coast, the G. mamillosa, *Ag.*

Endocladia muricata, *Ag.* On rocks at high water mark.

Chondrus affinis, *Harv.* "Irish Moss."

" **canaliculatus**, *Ag.* "Irish Moss."

Iridea dichotoma, *Boug.* Rare.

" **laminarioides**, *Boug.* "Rainbows." Rare. On rocks at low tide.

Callophyllis flabellulata, *Setch.*

" **furcata**, *Farlow*, and variety dissecta.

" **gracillarioides**, *Farlow.*

" **laciniata**, *Ktz.*

" **obtusifolia**, *Ag.*

" **variegata**, *Ktz.*

Gymnogongrus leptophyllus, *Ag.*

" **linearis**, *Ag.*

" **tenuis**, *Ag.*

Ahnfeldtia gigartinoides, *Ag.* Peculiar to the West Coast; cystocarps form nodose swellings in the upper part of the branches.

Ahnfeldtia plicata, *Fries.* (=*Gymnogongrus plicata*, Kutz.; *Gigartina plicata*, Lam.; *Sphærococcus plicatus*, Ag.)

P.

Order RHODYMENIEÆ.

Rhodymenia corallina, *Grev.*

" " form **linearis**, *Setch.*

" **palmata**, *Grev.* "Dulce" or "Dulse."

" **palmetta**, *Grev.*

Stenogramma interrupta, *Mont.* Several forms.

Rhabdonia Coulteri, *Harv.*

Cordylecladia conferta, *Ag.*

Plocamium coccineum, *Lynbg.*, and varieties.

" **violaceum**, *Farlow.*

Gracilaria confervoides, *Grev.*

Q.

Order DELESSARIEÆ.

Delessaria alata, *Lmx.*

" **decipiens**, *Ag.* Several forms.

" **quercifolia**, *Bory.*

" **Woodii**, *Ag.*

Nitophyllum (Neuroglossum) Andersonii, *Ag.*

" **Freyeanum**, *Harv.*

" **latissimum**, *Ag.*

" **Ruprechtianum**, *Ag.*

" **spectabile**, *Eaton.*

" **violaceum**, *J. Ag.*

R.

Order GELIDIEÆ. HYPNEÆ.

Gelidium cartilagineum, *Grev.*

" **corneum**, *Lmx.*

" **Coulteri**, *Harv.*

" **crinale**, *Farl.*

Hypneæ adunca, (?)

" **divaricata**, (?)

" **musciformis**, *Lmx.*

S.

Order RHODOMELEÆ.

Rhodomela floccosa, *Ag.*

" **Larix**, *Ag.*

Polysiphonia Baileyi, *Ag.*

" **bipinnata**, *Post. and Rupr.*

" **parasitica**, *Grev.*

Polysiphonia parasitica, **var. dendroides**, *Ag.*

" **pennata**, *Ag.*

" **senticulosa**, *Harv.*

" **urceolata**, *Grev.*, **var. patens.**

" **verticillata**, *Harv.*

" **Woodii**, *Harv.*

Laurencia obtusa, *Lmx.*

" **pinnatifida**, *Lmx.*

" **spectabilis**, *Post. and Rupr.*

" **virgata**, *Ag.* In many varied forms; sometimes hard to determine.

Chylocladia ovalis, *Hook.*; **var. Coulteri**, *Harv.*

Chondriopsis nidifica, *Harv.*

Dasya Helenæ, *Farl.*

" **subsecunda**, *Suhr.*

T.

Order CORALLINEÆ.

Corallina officinalis, *L.* On rocks.

" **squamata**, *Ellis and Sol.*

Amphiroa Orbigniana, *Harv.* (= *A. vertebralis.*)

Jania rubens, *Lmx.*

ALPHABETICAL INDEX AND CHECK LIST.

[NOTE.—The Roman figures and capital letters refer to the Class and Order to which the different genera belong, and will be found to be convenient for reference. The signification of the generic names is given in brackets, these will often be found to give material aid in determining the genus to which a plant belongs.]

AGARUM (meaning a fungus or mushroom), III. G.
Agarum Turneri, *Post. and Rupr.*

AHNFELDTIA (named for Ahnfeldt, a German botanist), IV. O.
Ahnfeldtia gigartinoides, *Ag.*
Ahnfeldtia plicata, *Fr.*

ALARIA (meaning winged), III. G.
Alaria esculenta, *Grev.*

AMPHIROA, IV. T.
Amphiroa Orbigniana, *Harv.*
Amphiroa vertebralis.

ANDERSONIELLA (named for Dr. Anderson), IV. N.
Andersoniella Farlowii, *Setch.* (Named for Prof. W. G. Farlow.

ASPEROCOCCUS (meaning rough-seeded), III. G.
Asperococcus sinuosus, *Bory.*

BANGIA,(In honor of N. W. Bang of Copenhagen), IV. J.
Bangia vermicularis, *Harv.*

BOSTRYCHIA (meaning a small curl), IV. S.
Bostrychia rivularis, *Harv.* Loc. (?)

BRYOPSIS (moss-like), II. C.
Bryopsis plumosa, *Lmx.*

CALLITHAMNION (a beautiful shrub), IV. M.
Callithamnion arbuscula, var. pacificum, *Harv.*
Callithamnion Dasyoides, *J. Ag.*
Callithamnion floccosum, A*g.*
Callithhmnion heteromorphum, *J. Ag.*

CALLOPHYLLIS (meaning beautiful leaf), IV. O.
Callophyllis flabellulata, *Setch.*
Callophyllis furcata, *Fartow.*
Callophyllis furcata, variety dissecta.
Callophyllis gracillarioides, *Farlow.*
Callophyllis laciniata, Ktz.
Callophyllis obtusifolia, *Ag.*
Callophyllis variegata, *Ktz.*
Callophyllis violacea, (?)

CENTROCERAS, IV. M.
Centroceras clavulatum, *Ag.*
Centroceras Eatonianum, *Farlow.* (In honor of D. C. Eaton.)

CERAMIUM (meaning a small pitcher), IV. M.
Ceramium diaphanum, *Roth.*
Ceramium proliferum.

Ceramium rubrum, *Ag.*

CHÆTOMORPHA (hair-shaped), II. D.

Chætomorpha clavata, *Farlow.*

CHONDRIOPSIS (meaning somewhat cartilaginous), IV. S.

Chondriopsis (Chondria) atropurpurea, *Harvey.* (?)

Chondriopsis atropurpurea, var. tenuior, *Farlow.*

Chondriopsis nidifica, *Harvey.* (?)

CHONDRUS (Cartilage), IV. O.

Chondrus affinis, *Harvey.*

Chondrus canaliculata, *Ag.*

CHORDARIA (Cord-like), III. G.

Chordaria abietina, *Ruprecht.*

CHROOLEPUS, II. E.

Chroolepus aureum, *Ktz.* (?)

CHYLOCLADIA (meaning juicy-branched) IV. S.

Chylocladia lomentaria. (?)

Chylocladia ovalis, *Hook.;* var. Coulteri, *Harv.*

Chylocladia subarticulata.

CHRYSOMENIA, IV. N.

Chrysomenia pseudodichotoma, *Farlow.*

CLADOPHORA (branch-bearing), II. D.

Cladophora cartilaginea, *Rupr.*

Cladophora laetevirens, *Dillw.*

CODIUM, II. G.

Codium tomentosum, *Stack.*

CORALLINA (a little coral), IV. T.

Corallina squamata, *Harv.*

CORDYLECLADIA (club-shaped branches), IV. P.

Cordylecladia conferta, *Ag.*

DASYA (meaning hairy), IV. S.

Dasya Helenae, *Farlow.*

Dasya plumosa, *Harvey.* (?)

Dasya subsecunda, *Suhr.*

DELESSARIA (in honor of Baron Benj. Delessert), IV. Q.

Delessaria alata, *Lmx.*

Delessaria decipiens, *Ag.*

Delessaria quercifolia, *Bory.*
(?) Delessaria Woodii, *Ag.*

DESMARESTIA (in honor of A. G. Desmarest, a French naturalist), III. G.
Desmarestia ligulata, *Lmx.*
Desmarestia ligulata, var. herbacea.

DICTYOTA (net-like), III. I.
Dictyota Kunthii, *Ag.*

ECTOCARPUS (having external fruits), III. G.
Ectocarpus granulosus, *Ag.*

EGREGIA (growing in clusters), III. H.
Egregia Menziesii, *Ag.*

ENDOCLADIA, IV. O.
Endocladia muricata, *Ag.*

ERYTHROPHYLLUM (red-leaved), IV. Q.
Erythrophyllum delesserioides, *Ag.*

FARLOWIA, see Andersoniella.

FAUCHIA (formerly distributed under the name of "Binghamia"), IV. M.
Fauchia californica, (=Binghamia californica, *Farl.*, in ms.)

FUCUS (a sea-weed), III. H.
Fucus fastigiatus, *Ag.*
Fucus Harveyanus, *Decn.*

GELIDIUM (ice-like, or jelly-like), IV. R.
Gelidium cartilagineum, *Grev.*
Gelidium corneum, *Lmx.*
Gelidium Coulteri, *Harv.*
Gelidium crinale, *Farlow.*

GIGARTINA (grape stones), IV. O.
Gigartina canaliculata, *Harv.*
Gigartina horrida, *Farlow.*
Gigartina mamillosa, *Ag.* =papillata, *Ag.*, variety.
Gigartina microphylla, *Harvey.*
Gigartina papillata, *Ag.*
Gigartina radula, *Ag.*
Gigartina spinosa, *Ktz.*

Gigartina volans, *Ag.*

GINANNIA, see Scinaia.

GYMNOGONGRUS (meaning naked excrescence), IV. O.
Gymnogongrus leptophyllus, *Ag.*
Gymnogongrus linearis, *Ag.*
Gymnogongrus tenuis, *Ag.*

GRACILARIA (slender, graceful), IV. P
Gracilaria confervoides, *Grev.*
Gracilaria multipartita, *Ag.*

GRATELOUPIA (named for Dr. Grateloup, a French algologist), IV. N.
Grateloupia Cutleri, *Ktz.*

GRIFFITHSIA (named for Mrs. Griffith, a celebrated English algologist), IV. M.
Griffithsia opuntioides, *Ag.*

HALYSERIS.
Halyseris polypodioides.
Halyseris polypoidiodes, var. cristata.

HALIDRYS (Sea Oak) III. H.
Halidrys osmundacea, *Harvey.*

HALOSACCION (a sea bag), IV. N.
Halosaccion hydrophora, *Ag.*

HELMINTHOCLADIA, IV. L.
Helminthocladia purpurea, *Setch.*

HYPNEÆ, (from "Hypnum," a genus of mosses), IV. R.
Hypnea adunca.
Hypnea divaricata.
Hypnea musciformis, *Lamx.*

IRIDEA (many colors), IV. O.
Iridea dichotoma, *Bory.*
Iridea laminarioides, *Bory.*

JANIA, IV. T.
Jania rubens, *Lmx.*

KALLYMENIA, IV. N.
Kallymenia californica, *Farlow.*

LAMINARIA (from lamina, a plate), III. G.

Laminaria Andersoni, *Farlow.*
Laminaria Sinclairi, *Farl. and Eaton.*
LAURENCIA (named for M. de la Laurencie), IV. E.
Laurencia obtusa, *Lmx.*
Laurencia pinnatifida, *Lmx.*
Laurencia pinnatifida, var. spinosa.
Laurencia spectabilis, *Post. and Ruprecht.*
Laurencia virgata, *Ag.*
LEIBMANNIA. III. G.
Leibmannia Leveillei, *Ag.*
LOMENTARIA (from lomentum, a pod with restricted joints).
Lomentaria ovalis, var. Coulteri.
MACROCYSTIS (large bladders), III. G.
Macrocystis pyrifera (pear-shaped), *Ag.* The "big kelp."
MESOGLOIA, (meaning slimy middle), III. G.
Mesogloia Andersonii, *Farlow.*
MICROCLADIA (minute branches), IV. M.
Microcladia borealis, *Rupr.*
Microcladia californica, *Farlow.*
Microcladia Coulteri, *Harvey.*
NEMALION (meaning thread-like), IV. L.
Nemalion Andersonii, *Farlow.*
(?) Nemalion lubricum.
Nemalion purpureum, *Chauv.*
Nemalion virens, *J. Ag.* (Anderson's list.)
NEMASTOMA (from *Nema*, a thread and *stoma*, a mouth), IV. N.
NEREOCYSTIS (a sea bladder), III. G.
Nereocystis Lutkeana, *Rupr.*
NITOPHYLLUM (a shining leaf), IV. Q.
Nitophyllum Andersonii, *Ag.*
Nitophyllum Freyeanum, *Harvey.*
Nitophyllum latissimum, *Ag.*
Nitophyllum Ruprechtianum, *Ag.*
Nitophyllum spectabile, *Eaton.*
Nitophyllum violaceum, *J. Ag.*
PHYLLITIS (leaf-shaped like a hart's tongue), III. G.

Phyllitis fascia, *Kutz.*

PIKEA (Named for Captain Pike, of New York), IV. M.

Pikea californica, *Harvey.*

PLOCAMIUM (Braided hair), IV. P.

Plocamium coccineum, *Lyngb.*

Plocamium violaceum, *Farlow.*

POLYSIPHONIA (Many tubes), IV. S.

Polysiphonia Baileyi, *Ag.*

(?) Polysiphonia gemmifera,

Polysiphonia parasitica, *Grev.*

Polysiphonia parasitica, var. dendroides, *Ag.*

Polysiphonia pennata, *Ag.*

Polysiphonia senticulosa, *Harvey.*

Polysiphonia urceolata, *Grev,*

Polysiphonia urceolata, var. patens.

Polysiphonia verticillata, *Harvey.*

Polysiphonia Woodii, *Harvey.*

PORPHYRA (Purple weed), IV. J.

Porphyra vulgaris, *Ag.* (P. laciniata, *Ag.*, and P. linearis, *Grev.*).

PRIONITIS (A little saw), IV. N.

Prionitis decipiens.

Prionitis lanceolata, *Harvey;* and variety.

PTILOTA (Pinnated, or plumed), IV. M.

Ptilota densa. (?)

Ptilota hypnoides, *Harvey.*

RHABDONIA (Rod-like), IV. P.

Rhabdonia Coulteri, *Harvey.*

RHODOMELA (Red-black), IV. S.

Rhodomela floccosa, *Ag.*

Rhodomela larix, *Ag.*

RHODYMENIA (Red membrane), IV. P.

Rhodymonia cerallina, *Grev.*

Rhodymenia corallina, form linearis.

Rhodymenia palmata, *Grev.* (?)

Rhodymenia palmetta, *Grev.*

RICARDIA, IV. N.

Ricardia Montagnei, *Derbes and Sol.*

SARCOPHYLLIS, IV. N.

Sarcophyllis californica, *J. Ag.* (=Schizymenia coccinea)

SARGASSUM (From Sargazo, the Spanish for sea-lentils), III. H.

Sargassum Agardianum, *Farlow.*

SCHIZYMENIA, IV. N.

Schizymenia edulis, *Ag.*

Schizymenia obtusa.

SCINAIA (In honor of Dominico Scina), IV. L.

Scinaia furcellata. *Bivon.*

Scinaia furcellata, var. undulata.

SCYTOSIPHON (A leathery tube), III. G.

Scytosiphon lomentarius, *Ag.*

SPHACELARIA (Signifying gangrene, referring to the tips of the branches which are black and shrivelled when dried), III. G.

Sphacelaria fusca, *Ag.*

STENOGRAMMA (Interrupted mark, or line), IV. P.

Stenogramma interrupta, *Mont.*

TAENIOMA, IV. M.

Taenioma Clevelandii, *Farlow.*

TAONIA, III. I.

Taonia Lennebackerae.

ULVA (From Celtic Ul, meaning water), II. D.

Ulva compressa, *Le Jolis.*

Ulva enteromorpha, *Le Jolis.*

Ulva fasciata, *Delile.*

Ulva intestinalis, *Le Jolis.*

Ulva latissima, *L.*

ZONARIA (Belted, or zoned), III. I.

Zonaria Tournefortii, *Ag.*

ERRATA.

On page 8, eleventh line from top for "Tournifortii" read **Tournefortii.**

On page 10, eighth line from bottom, for "Bimreya" read **Binneya.**

Same page, bottom line, for "Manillosa" read **mamillosa.**

On page 10, between third and fourth line from bottom, insert, "**O.** Order GIGARTINEÆ."

Publications of Santa Barbara Society of Natural History.

BULLETIN NO. 1.

March, 1887.

Notes on Climate ..... Dr. L. N. Dimmick
Infusorial Earth at Santa Barbara; Cal. ..... Dr. W. W. Finch
Notes on Excavations Made in Indian Burial Places in Carpinteria ..... H. C. Ford
Flora Near Santa Barbara, Cal. ..... Mrs. R. F. Bingham
The Water Birds of San Miguel Island ..... Clark P. Streator
Prehistoric Man in California ..... Dr. Lorenzo G. Yates
Deceased Members .....

BULLETIN NO. 2.

October 1890.

Report of Museum and Library .....
President's Annual Address (1889) .....
Ferns of the Channel Islands ..... L. G. Yates
Coniferous Wood Saturated with Bitumen ..... H. C. Ford
Allanite ..... L. G. Yates
Charm Stones—Illustrated ..... L. G. Yates
Indigenous Shrubs of Santa Barbara County ..... H. C. Ford
The Eucalyptus and the Honey Bee ..... R. F. Bingham
Medicinal Plants ..... Mrs. R. F. Bingham
Mollusca of Santa Barbara County—Illustated by Ford, L. G. Yates
Experiment to Show the Expansion of Wood—Illustrated, H. D. Vail
Solfataras in Vicinity of Santa Barbara ..... H. C. Ford
Lyonothamnus Asplenifolius ..... H. C. Fgrd

BULLETIN NO. 3.

January, 1902.

The Marine Algæ of Santa Barbara County, California, L. G. Yates
Chalk and Chalk Towns ..... Alice Constance Austin
Some Observations of Bees ..... Mrs. M. E. Badger Holden

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